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10/734,047	12/10/2003	Hyuk Tark Kwon	AD7076 USNA	8995

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EXAMINER	
WOLLSCHLAGER, JEFFREY MICHAEL	
ART UNIT	**PAPER NUMBER**
1732	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/734,047	KWON, HYUK TARK	
	Examiner	Art Unit	
	Jeff Wollschlager	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 October 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12,29, and 31-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,29 and 31-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's amendment to the claims filed October 25, 2006 has been entered. Claims 1-4, 9-12, and 29 are currently amended. Claims 13-28 and 30 are canceled. Claims 31-35 are new. Applicant's amendment to the claims has overcome the previous 35 U.S.C. 112, second paragraph rejection of claims 1-12, 17-22, 26 and 29. The rejection is withdrawn. The objection to claims 12 and 17 is withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 29 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Dundas et al. (U.S. Patent 5,068,075; issued November 26, 1991).

Regarding claim 1, Dundas et al. teach a method for manufacturing a monolayer or multilayer container comprising: heating each of at least two thermoplastic polymers to a temperature above the melt temperature of each to obtain a homogeneous melt of each of the at least two polymers; co-extruding the at least two thermoplastic polymers through a co-extrusion blow molding head into an open mold (2:21-28); using the extrusion blow molding machine to blow mold the at least two thermoplastic materials to

form a blow molded structure having an internal surface and an external surface; a mold comprising a first cooling means for cooling the outside of the blow molded structure and a second cooling means for cooling the inside of the blow molded structure as it is blow molded (1:42-46 and 55-64); a pinch off area and dual pinching means (i.e. closing mold halves) for pinching the outer layer in a manner such that the outer layer forces the at least one other layer out of the pinch off area (Figure 2 and Figure 4, element (34)); and using the first and second cooling means to cool the inside and outside of the blow molded structure to a temperature below about 22 °C/ambient while forming the blow molded structure (3:40-42; 4:64-66; 5:14-18 and 29-36; 6:2-3).

Alternatively, it would have been obvious to one having ordinary skill in the art at the time of the claimed invention to cool the temperature to "about 22 °C" since the recitation "about 22 °C" would have been reasonably understood by one having ordinary skill in the art to overlap the ambient temperature range taught by Dundas et al. Additionally, one having ordinary skill would have been motivated to cool to "about 22 °C" for the purpose of rapidly cooling the container.

As to claim 2, the co-extrusion process employed by Dundas et al. discloses a first and second polymer (2:21-27).

As to claim 3, the co-extrusion process disclosed by Dundas et al. would inherently have a second head modified sufficiently to extrude the second polymer (2:21-27).

As to claim 4, the first cooling means is a temperature of about 60 °F/16 °C (6:2-3) and a means for discharging cold gas under pressure (5:4-18). Additionally, the blow

air employed by Dundas et al. intrinsically provides cooling to the molten parison while it is being blown.

Regarding claim 29, Dundas et al. teach a method for manufacturing a monolayer or multilayer container comprising: heating each of at least two thermoplastic polymers to a temperature above the melt temperature of each to obtain a homogeneous melt of each of the at least two polymers; co-extruding the at least two thermoplastic polymers through a co-extrusion blow molding head into an open mold (2:21-28); using the extrusion blow molding machine to blow mold the at least two thermoplastic materials to form a blow molded structure having an internal surface and an external surface; a mold comprising a first cooling means for cooling the outside of the blow molded structure and a second cooling means for cooling the inside of the blow molded structure as it is blow molded (1:42-46 and 55-64); a pinch off area and dual pinching means (i.e. closing mold halves) for pinching the outer layer in a manner such that the outer layer forces the at least one other layer out of the pinch off area (Figure 2 and Figure 4, element (34)); and using the first and second cooling means to cool the inside and outside of the blow molded structure to a temperature below about 22 °C/ambient while forming the blow molded structure (3:40-42; 4:64-66; 5:14-18 and 29-36; 6:2-3), wherein the mold surface is not polished and thus is roughened and contains surface imperfections.

Alternatively, it would have been obvious to one having ordinary skill in the art at the time of the claimed invention to cool the temperature to “about 22 °C” since the recitation “about 22 °C” would have been reasonably understood by one having ordinary

skill in the art to overlap the ambient temperature range taught by Dundas et al.

Additionally, one having ordinary skill would have been motivated to cool to "about 22 °C" for the purpose of rapidly cooling the container.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dundas et al. (U.S. Patent 5,068,075; issued November 26, 1991).

As to claims 5-8, Dundas et al. teach the method of claim 1 as discussed in the rejection above. They do not expressly disclose the cold gas is less than the specifically claimed temperatures. However, it would have been *prima facie* obvious to one having ordinary skill in the art to optimize the temperature of the blow gas for the purpose of reducing cycle time and improving productivity as is routinely practiced in the art.

Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dundas et al., as applied to claims 1-8 above, and further in view of Nohara et al (U.S. Patent 3,882,259; issued May 6, 1975) or Suzuki et al. (U.S. Patent 4,079,850; issued March 21, 1978).

As to claims 9-11, Dundas et al. teach the method of claim 1 as discussed in the rejection above, but do not disclose employing the specific claimed resins. However, Nohara et al. and Suzuki et al. each individually teach an analogous method of manufacturing a container wherein an ionomer acid copolymer is employed (Abstract, 1:60-64, 2:35-41).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to modify the method taught by Dundas et al. by employing the specific ionomer acid copolymer taught by either Nohara et al. or Suzuki et al. for the purpose, as taught by Nohara et al., of improving the resistance of the container to gas and moisture permeation (Abstract) and as taught by Suzuki et al, of improving resistance to oxygen permeability (col. 4, lines 48-66).

As to claim 12, Dundas et al. teach the pinched point is flat or tapered at least slightly toward the inner cavity of the blow molded structure (Figure 2 and Figure 4, element (34)). Additionally, Dundas et al. do not polish the mold surfaces. As such, the surface imperfections have not been removed and a roughened, not polished, surface exists.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dundas et al. in view of Nohara et al. or Suzuki et al., as applied to claim 11 above, and further in view of Sugawara et al (U.S. Patent 6,303,071; issued October 16, 2001).

As to claim 12, Dundas et al. in view of Nohara et al. or Suzuki et al. teach the method of claim 11 as discussed in the 103(a) rejection above. Additionally, they

implicitly teach the surface is roughened, not polished. In an alternative interpretation of the claim, Dundas et al do not expressly teach an active step of roughening the surface of the mold. However, Sugawara et al. teach an analogous method where they emboss/roughen the surface in order to produce a desired surface feature on the molded surface (col. 2, lines 53-59 and col. 8, lines 61-67).

Therefore, it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to modify the teaching of Dundas et al. with the embossed/roughened mold surface taught by Sugawara et al. for the purpose of producing a desired surface feature on the molded structure.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable Dundas et al. (U.S. Patent 5,068,075; issued November 26, 1991) in view of Sugawara et al. (U.S. Patent 6,303,071; issued October 16, 2001).

Regarding claim 29, Dundas et al. teach a method for manufacturing a monolayer or multilayer container comprising: heating each of at least two thermoplastic polymers to a temperature above the melt temperature of each to obtain a homogeneous melt of each of the at least two polymers; co-extruding the at least two thermoplastic polymers through a co-extrusion blow molding head into an open mold (2:21-28); using the extrusion blow molding machine to blow mold the at least two thermoplastic materials to form a blow molded structure having an internal surface and an external surface; a mold comprising a first cooling means for cooling the outside of the blow molded structure and a second cooling means for cooling the inside of the

blow molded structure as it is blow molded (1:42-46 and 55-64); a pinch off area and dual pinching means (i.e. closing mold halves) for pinching the outer layer in a manner such that the outer layer forces the at least one other layer out of the pinch off area (Figure 2 and Figure 4, element (34)); and using the first and second cooling means to cool the inside and outside of the blow molded structure to a temperature below about 22 °C/ambient while forming the blow molded structure (3:40-42; 4:64-66; 5:14-18 and 29-36; 6:2-3), wherein the mold surface is not polished and thus is roughened due to the existing surface imperfections.

In an alternative interpretation of the claim, Dundas et al. do not expressly teach an active step of roughening the surface of the mold. However, Sugawara et al. teach an analogous method where they emboss/roughen the surface of the claim in order to produce a desired surface feature on the molded surface (col. 2, lines 53-59 and col. 8, lines 61-67).

Therefore, it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to modify the teaching of Dundas et al. with the embossed/roughened mold surface taught by Sugawara et al. for the purpose of producing a desired surface feature on the molded structure.

Claims 1-12 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (U.S. Patent 4,079,850; issued March 21, 1978) in view of Bose (U.S. Patent 3,789,093; issued January 29, 1974).

Regarding claims 1-3, Suzuki et al., teach a method for manufacturing a multilayer container comprising: heating each of at least two thermoplastic polymers to a temperature above the melt temperature of each to obtain a homogeneous melt of each of the at least two polymers; co-extruding the at least two thermoplastic polymers through a co-extrusion blow molding head into an open mold; using the extrusion blow molding machine to blow mold the at least two thermoplastic materials to form a blow molded structure having an internal surface and an external surface; a mold having a pinch off area and dual pinching means for pinching the outer layer in a manner such that the outer layer forces the at least one other layer out of the pinch off area (Abstract; Figures 2-A and 2-B; col. 1, lines 64-col. 2,line 3; col. 2, lines 10-30 and 50-67; col. 4, lines 2-19 and 49-67).

Suzuki et al. do not expressly disclose the means of cooling employed in their process. However, Bose teaches a method for accelerating molding cycle time by employing a first and second cooling means to reduce the inside and outside of the blow molded structure to a temperature less than ambient while forming the structure (col. 1, line 63-col. 2, line 1; col. 2, lines 24-47; col. 3, lines 5-15 and 35-55; col. 4, lines 30-59).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to employ the specific cooling means taught by Bose in the method taught by Suzuki for the purpose, as taught by Bose, of reducing the cycle time of the molding process (Abstract).

As to claims 4-8, Bose teaches a process where the discharged gas is carbon dioxide emitted at outside ambient temperature (col. 2, lines 56-64).

As to claims 9-12, Suzuki et al. teach utilizing the claimed resins (col. 4, lines 49-65) and the molded article contains a pinched point with a taper (Figure 2B).

Regarding claim 29, Suzuki et al., teach a method for manufacturing a multilayer container comprising: heating each of at least two thermoplastic polymers to a temperature above the melt temperature of each to obtain a homogeneous melt of each of the at least two polymers; co-extruding the at least two thermoplastic polymers through a co-extrusion blow molding head into an open mold; using the extrusion blow molding machine to blow mold the at least two thermoplastic materials to form a blow molded structure having an internal surface and an external surface; a mold having a pinch off area and dual pinching means for pinching the outer layer in a manner such that the outer layer forces the at least one other layer out of the pinch off area, wherein the mold surface is not polished and thus is roughened due to the existing surface imperfections. (Abstract; Figures 2-A and 2-B; col. 1, lines 64-col. 2,line 3; col. 2, lines 10-30 and 50-67; col. 4, lines 2-19 and 49-67).

Suzuki et al. do not expressly disclose the means of cooling employed in their process. However, Bose teaches a method for accelerating molding cycle time by employing a first and second cooling means to reduce the inside and outside of the blow molded structure to a temperature less than ambient while forming the structure (col. 1, line 63-col. 2, line 1; col. 2, lines 24-47; col. 3, lines 5-15 and 35-55; col. 4, lines 30-59).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to employ the specific cooling means taught by Bose in the method taught by Suzuki for the purpose, as taught by Bose, of reducing the cycle time of the molding process (Abstract).

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (U.S. Patent 4,079,850; issued March 21, 1978) in view of Bose (U.S. Patent 3,789,093; issued January 29, 1974) and further in view of Sugawara et al. (U.S. Patent 6,303,071; issued October 16, 2001).

Suzuki et al., teach a method for manufacturing a multilayer container comprising: heating each of at least two thermoplastic polymers to a temperature above the melt temperature of each to obtain a homogeneous melt of each of the at least two polymers; co-extruding the at least two thermoplastic polymers through a co-extrusion blow molding head into an open mold; using the extrusion blow molding machine to blow mold the at least two thermoplastic materials to form a blow molded structure having an internal surface and an external surface; a mold having a pinch off area and dual pinching means for pinching the outer layer in a manner such that the outer layer forces the at least one other layer out of the pinch off area, wherein the mold surface is not polished and thus is roughened due to the existing surface imperfections. (Abstract; Figures 2-A and 2-B; col. 1, lines 64-col. 2,line 3; col. 2, lines 10-30 and 50-67; col. 4, lines 2-19 and 49-67).

Suzuki et al. do not expressly disclose the means of cooling employed in their process. Additionally, in an alternative interpretation of the claim, Suzuki et al. do not teach an active step of roughening the surface of the mold. However, Bose teaches a method for accelerating molding cycle time by employing a first and second cooling means to reduce the inside and outside of the blow molded structure to a temperature less than ambient while forming the structure (col. 1, line 63-col. 2, line 1; col. 2, lines 24-47; col. 3, lines 5-15 and 35-55; col. 4, lines 30-59) and Sugawara et al. teach the surface of the mold may be embossed/roughened to create a desired surface appearance.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to employ the specific cooling means taught by Bose in the method taught by Suzuki for the purpose, as taught by Bose, of reducing the cycle time of the molding process (Abstract) and to employ the roughened/embossed mold surface taught by Sugawara et al. for the purpose of creating a desired surface appearance for the molded structure.

Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (U.S. Patent 4,079,850; issued March 21, 1978) in view of Bose (U.S. Patent 3,789,093; issued January 29, 1974), as applied to claim 4 above, and further in view of Ryder (U.S. Patent 4,091,059).

As to claims 31 and 32, Suzuki et al. in view of Bose teach the method of claim 4 as discussed above but do not expressly disclose the claimed method of allowing the

escape of gas. However, Ryder discloses a method for blow molding and cooling a plastic article wherein he provides a means to allow escape of gas from the inside of a blow molded structure with a blowing pin (Figure 1, elements (28), (29); col. 1, lines 25-35; col. 3, lines 55-57).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to modify the teaching of Suzuki et al. in view of Bose with the teaching of Ryder to allow a means for the escape of gas from the blow molded structure with a blow pin, for the purpose, as taught by Ryder of rapidly cooling the interior of the blow molded article while avoiding freeze-up and the excessive costs of carbon dioxide (col. 1, lines 51-55; col. 2, lines 40-41; abstract).

Claims 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (U.S. Patent 4,079,850; issued March 21, 1978) in view of Bose (U.S. Patent 3,789,093; issued January 29, 1974), as applied to claim 4 above and further in view of Wechsler et al. (U.S. Patent 3,114,596).

As to claims 31 and 32, Suzuki et al. in view of Bose teach the method of claim 4 as discussed above but do not expressly disclose the claimed method of allowing the escape of gas. However, Wechsler et al. disclose a method for blow molding and cooling a plastic article wherein he provides a means to allow escape of gas and fluid from the inside of a blow molded structure with a blowing pin (col. 1, lines 31-42; col. 2, lines 3-8).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to modify the teaching of Suzuki et al. in view

of Bose with the teaching of Wechsler et al. to allow a means for the escape of gas and fluid from the blow molded structure with a blow pin, for the purpose, as taught by Weichsler et al. of rapidly cooling the interior of the blow molded article and to reduce cycle time with improved appearance of the article (col. 1, lines 17-30).

As to claim 33, Wechsler teach that water jacketed blow pins are conventional (col. 1, lines 20-29).

As to claims 34, Wechsler provides apertures/skirts/channels for allowing the escape of the interior cooling media (col. 1, lines 32-42; col. 2, lines 3-8).

As to claim 35, Wechsler do not polish the surface of the blow pin, further the blow pin has apertures. As such the blow pin has a "rough surface".

Response to Arguments

Applicant's arguments filed October 25, 2006 have been considered and they are not persuasive.

Applicant's arguments appear to be on the following grounds:

1. Dundas et al. teach a second cooling means for cooling the interior of the article by venting gas from the interior of the blow molded article whereas the current invention discloses a second cooling means for cooling the interior by discharging cold gas into the parison during inflation.

2. Dundas et al. do not disclose a homogeneous and gel-free resin.

3. Bose does not teach or suggest a second cooling means involving the discharge of cold gas into the inner cavity of the parison during inflation.

4. Suzuki teaches the pinched area has a tapered projection protruding outwardly whereas the current invention recites the pinched point is flat or tapered toward the inner cavity.

Applicant's arguments are not persuasive for the following reasons:

1. Dundas et al. also employ gas to blow mold the parison during inflation. The gas intrinsically provides cooling to the parison during injection into the parison as well providing cooling while it is venting from the blow molded article. Further the examiner notes that the recitation of a "cold gas" does not appear in independent claim 1.

2. Dundas et al. employ the same claimed process steps and the same claimed thermoplastic polymer in the same claimed manner. As such, it is the examiner's position that the thermoplastic polymer employed by Dundas et al. is "gel-free" and "homogeneous" as currently claimed in amended claim 1.

3. Bose discharge carbon dioxide into the inner cavity of the parison during inflation. The carbon dioxide is stored in an outside vessel at ambient condition (col. 2, lines 56-64). As such, the range of ambient outside temperatures reads on the claimed "cold gas" of about 20 °C, 18 °C, 15 °C and about 5 °C. These recited temperatures are within the expected range of outside ambient temperatures.

4. The examiner's interpretation of the tapered projection being the same as the tapered projection disclosed by Suzuki is supported by the instant specification (US 2005/0129888) wherein "forming a flat bottom, or a bottom wherein the joint-or pinch-off point- is at least slight convex." (paragraph [0024]). The term convex means to curve or

bulge outward. As such, the examiner interprets the tapered projection disclosed by Suzuki (Figure 2B) to meet the current claim limitation.

Conclusion

All claims are rejected.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Lopez (U.S. 6,312,248) discloses a blow molding method with a water cooled blow pin.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is 571-272-8937. The examiner can normally be reached on Monday - Thursday 7:00 - 4:45, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JW

Jeff Wollschlager
Examiner
Art Unit 1732

January 6, 2007

CHRISTINA JOHNSON
SUPERVISORY PATENT EXAMINER

1/8/07